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The Trans-Pacific Partnership:

Origin, Evolution, Special Features, and Economic Implications

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Abstract

The Trans-Pacific Partnership (TPP) agreement was signed by its 12 members in February 2016 after concluding its difficult and long negotiations. The TPP is an ambitious agreement with high-level of trade and investment liberalization and comprehensive issue coverage, setting a new standard for global trade. Large economic benefits can be expected from the enactment of the TPP. The ratification of the TPP in its agreed form is not possible because of the withdrawal of the US from the TPP. The paper argues that the TPP without the US, or TPP11, should be pursued by remaining 11 members, to keep the momentum toward trade and investment liberalization and to fight against growing protectionism.

Keywords: Trans-Pacific Partnership; ASEAN; Trade Liberalization

JEL Classification: F15; F53

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1. Introduction

The world has been witnessing the proliferation of free trade agreements (FTA). It was in the late 1980s-early 1990s when the number of FTAs started to increase sharply in Europe, Asia Pacific, and Latin America. At least two factors can be identified to have promoted this trend. One is the progress on European integration, which started in the 1950s and made substantial progress in the late 1980s, and influenced other countries such as the United States to become interested in establishing FTAs in order to secure export markets. Another factor is slow progress in multilateral trade negotiations. The Uruguay Round, the last multilateral trade negotiations under the General Agreement on Tariffs and Trade (GATT), began in 1986 with the target year of conclusion in 1990. However, the negotiations did not proceed as planned and it went into a deadlock around 1990. Faced with a stalemate in the Uruguay Round negotiations, GATT members that were eager to promote trade liberalization, in order mainly to increase exports, began to have an interest in FTAs.

The Uruguay Round negotiations reached a conclusion in 1994 and the World Trade Organization (WTO) was established in 1995 as a successor to the GATT with strengthened institutional arrangement in the form of international organization rather than a treaty, which the GATT was, and with a broader issue coverage including trade in services and investment. The proliferation of FTAs continued even after the WTO was established, because multilateral trade negotiations did not get started until 2001. Although the Doha Development Agenda (DDA), the first multilateral trade negotiation under the WTO, began in 2001, FTAs continued to increase in their numbers as the DDA did not make much progress.

Mega FTAs involving many major countries began to be discussed and negotiated in the early 2000s. Three mega-FTAs began to be negotiated in the 2010s. The negotiations on the Trans-Pacific Partnership (TPP) began in March 2010 with eight members including Australia, Brunei, Chile, New Zealand, Peru, Singapore, the United States (US), and Vietnam. The TPP negotiations involving 12 countries reached an agreement in October 2015, as four countries including Malaysia, Canada, Mexico and Japan joined the negotiations after they began. The TPP treaty was signed by 12 members in February 2016 and currently in the process of ratification by the members. Japan and New Zealand ratified the treaty, but the enactment of the treaty is very unlikely, because the United States decided to withdraw from the treaty under the new Trump government. The negotiations on the Regional Comprehensive Economic Partnership (RCEP) in East Asia involving 16 East Asian countries including China, India, and Japan, and the Trans-Atlantic Trade and Investment Partnership (TTIP) agreement involving the United States and 28 European Union (EU) members began negotiations in May and August 2013, respectively, and both of them are still under negotiation.

In light of these developments in recent years, this paper takes up the TPP, the mega-FTA that attracted most attention in Asia-Pacific, and examines its origins, evolution, special features and economic implications to the negotiating members as well as other members of the Asia Pacific Economic Cooperation (APEC) forum, as the TPP is considered a pathway to a Free Trade Area of Asia-Pacific (FTAAP), which is envisaged to include APEC members. It should be noted that RCEP is considered as another pathway to FTAAP.

The structure of the paper is as follows. After this introductory section, section 2 discusses the origin and evolution of the TPP. Section 3 examines economic profiles of the TPP members as well as non-TPP APEC members, to set the stage for an analysis of the TPP. Section 4 discusses special features of the TPP Agreement, while section 5 examines the economic impacts of the TPP. Section 6 presents some concluding remarks, including the recent development of possible formation of the TPP11, that is, the TPP without the United States.

2. Origin and Evolution of the TPP

The origin of the Trans-Pacific Partnership (TPP) can be traced back to the P4 (Pacific 4) Agreement, which was a free trade agreement (FTA) negotiated by Brunei Darussalam, Chile, Singapore and New Zealand and entered into effect in 2006. At several Asia-Pacific Economic Cooperation (APEC) meetings in the 1990s, Australia, Chile, New Zealand, Singapore and the US (P5) held informal meetings intended to discuss mechanisms for creating a new type of trade agreement among "likeminded" states[1]. Out of P5, Chile, Singapore and New Zealand, which shared very high enthusiasm for establishing a high-level FTA, launched the negotiations at the APEC Leaders' Summit in 2002. Brunei joined the negotiations in 2005[2]. Most of the negotiations were concluded by 2006, although the negotiations on Brunei's services and government procurement finished in 2008.

It may be important to note that several attempts at trade liberalization under the APEC framework had been unsuccessful, leading to the formulation of P4. One is slow progress toward achieving the Bogor Goals of free trade and investment, and another is the failure of the Early Voluntary Sectoral Liberalization (EVSL). In 1994, APEC Leaders met in Bogor and committed to achieve free trade and investment by 2010 for industrialized economies and by 2020 for developing economies. APEC Leaders introduced the Osaka Action Agenda (OAA) in 1995 and the Manila Action Plan in 1996, in order to make progress toward the Bogor Goals, but the progress was disappointingly small. The EVSL was an initiative developed by the APEC trade ministers in 1997 to liberalize the selective sectors, which were agreed upon by the APEC members, as a way to pursue the OAA[3]. For trade liberalization, the EVSL identified nine fast track sectors including forestry and fish products, chemicals and environmental products, and six sectors, which need further work, including food, oil seeds, and automotive. The EVSL was not implemented as Japan refused to liberalize forestry and fish products, food and oil seeds.

It should be noted that slow progress on multilateral trade liberalization negotiations under the WTO and the increasing number of FTAs in many parts of the world, as pointed out in the introduction, were factors leading to the formation of P4. Finally, it should also be mentioned that the Asian Financial Crisis that erupted in 1997 in East Asia kept policy makers' attention away from trade liberalization from the late 1990s to the early 2000s.

The P4 was a comprehensive FTA covering broad range of issues including trade in goods and services, rules of origin, trade remedies, sanitary and phytosanitary (SPS) measures, technical barriers to trade (TBT), competition policy, intellectual property, government procurement, economic

[1] Elms and Lim (2012). Elms and Lim provides detailed discussions on the origin and evolution of the TPP.
[2] New Zealand Ministry of Foreign Affairs http://www.mfat.govt.nz/Trade-and-Economic-Relations/2-Trade-Relationships-and-Agreements/Trans-Pacific/2-P4.php
[3] See, Okamoto (2000), for the details account of the discussions regarding the EVSL.

cooperation, and dispute settlement[4]. P4 was a high- level FTA requiring the members to eliminate tariffs on basically all the products by 2015. The primary objective of P4 was the establishment of business friendly environment under which free trade and investment are achieved with fair competition and effective protection and enforcement of intellectual property rights[5]. Another important objective is to support the APEC process toward the goals of free and open trade and investment. In other words, the founding members had hoped that P4 would become a foundation for a larger trade agreement by accepting new members.

In March 2008, P4 members began negotiations on trade in financial services and investment, in order to broaden P4's issue coverage. Broadening the issue coverage to meet the demands/needs of the businesses was one of notable characteristics of P4, which is known as a living agreement. In September that year the United States, which was interested in liberalization of financial services and investment, made an announcement to seek to join the expanded P4 negotiations. The Obama Administration, which began in January 2009, decided to join the expanded P4 negotiations in November 2009. Australia, Peru, and Vietnam quickly joined the US in expressing the intention of joining the negotiations. During this period the P4 became the Trans-Pacific Partnership (TPP). It should be noted that emergence of the discussions on the formulation of region-wide FTAs in East Asia, in the forms of ASEAN+3 (China, Japan, Korea) and ASEAN+6 (China, Japan, Korea, India, Australia, New Zealand) FTAs, appeared to have made the US interested in the TPP, which encompass the countries in both sides of the Pacific, in order not to be kept out from East Asia.

The first round of negotiations in the TPP was held in Melbourne in March 2010 among eight countries: Australia, Brunei, Chile, New Zealand, Peru, Singapore, and the United States with Vietnam participating as an associate member at that time[6]. Subsequently, Malaysia (October 2010), Canada (October 2012), Mexico (October 2012), and Japan (July 2013) joined the negotiations. It should be noted that it is quite unusual for new members to join FTA negotiations during the negotiations.

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[4] Trans-Pacific Strategic Economic Partnership Agreement

http://www.mfat.govt.nz/downloads/trade-agreement/transpacific/main-agreement.pdf

[5] ibid.

[6] Elm and Lim (2012) provides a concise and good description of the negotiations.

The TPP negotiations did not go smoothly as they were faced with many difficult issues. Indeed, 19 rounds of negotiations took place and in addition many official meetings involving chief negotiations and other government officials were held.[7] Several Leaders' and Ministers' meetings were held without reaching an agreement. The negotiating countries missed three targeted dates for reaching an agreement, November 2011, December 2012, and December 2013. Since Japan joined the negotiations, progress or a lack of progress in bilateral negotiations between Japan and the US, two largest economies among the negotiating members, became the pace setter in overall negotiations. The negotiations reached an overall agreement in October 2015 and the agreement was signed in February 2016. The high frequency of the negotiations indicated that there was a strong interest in the establishment of the TPP by the negotiating members, especially the United States. The difficult issues in the negotiations include market access in goods, particularly agricultural products, textiles, and automobiles, intellectual property rights, investment, specifically, investor-state dispute settlement (ISDS), environment and others. The contents of the TPP agreement will be analyzed in section 5.

3. Economic Profiles of the TPP Member Economies

The TPP negotiations were very difficult, taking substantial time and effort of not only government officials but also business people, researchers, and others. One may wonder if the TPP is worth establishing. This section tries to analyze the importance of the TPP from an economic perspective. It is important to observe that the TPP has political implications as well, but the analysis in this section is confined to economic aspects. In the analysis, not only TPP members but also non-TPP APEC members are taken up, because the TPP is considered to be a step toward the establishment of a Free Trade Area of Asia-Pacific (FTAAP), which is a free trade area involving all the APEC members.

[7] The 19th round was finished in August 2013, and since then they stopped calling rounds, instead they started to use the expression "officials' meeting."

3.1 Basic Economic Statistics

Table 1 shows basic economic data for TPP and non-TPP APEC member economies for 2015. APEC member economies as a group account for a very large part of the world economy in terms of population, GDP, foreign trade (merchandise exports and imports), and foreign direct investment (outward and inward FDI stock). In 2015, population of the APEC economies as a group was 2.8 billion, accounting for 38.8 percent of world population. For the same year, GDP of APEC economies as a group was at US$43.4 trillion, accounting for 59.1 percent of world GDP. These figures, APEC shares in world population and GDP, indicate that the average per capita GDP for APEC economies was higher than the average for non-APEC members, US$15,304 for APEC economies and US$10,005 for non-APEC economies. One finds a wide diversity in per capita GDP among the APEC members. The highest is Australia at US$56,328, while the lowest is Vietnam at US$2,111, or 1/27 of the corresponding figure for Australia. The shares of APEC economies in world trade and world FDI are approximately 50 percent.

Let us turn to the twelve economies that joined the TPP negotiations and signed the agreement and compare them with those not involved in the TPP (Non-TPP). In terms of population, in 2015 non-TPP members are more than twice as large as TPP members, while more or less the opposite pattern is found for GDP. TPP members accounted for 37.4 percent of world GDP in 2015, while the corresponding share for non-TPP members was 21.7 percent. Although not shown in the table, it should be noted that this gap narrowed very fast, as the shares of TPP and non-TPP members in world GDP were 51.8 and 5.9 percent, respectively, in 1989. In terms of foreign trade, the magnitudes of TPP and non-TPP members were more or less similar in terms of exports (24-26.5% of world exports), while TPP members (28.6%) is somewhat larger than non-TPP members (21.1%) in terms of imports. As for foreign direct investment, the shares of TPP members are more than twice as large as those of non-TPP members both for outward and inward FDI.

Table 1: Economic Profile of APEC Member Economies, 2015

	Population		GDP		GDP Per Capita	Exports		Imports		Outward FDI Stock		Inward FDI Stock	
Economy	**$ mil**	**%**	**$ bil**	**%**	**$**	**$ bil**	**%**	**$bil**	**%**	**$ bil**	**%**	**$ bil**	**%**
Australia	24	0.3	1,340	1.8	56,328	188	1.1	208	1.2	396	1.6	537	2.2
Brunei Darussalam	0	0.0	15	0.0	36,608	7	0.0	3	0.0	3	0.0	6	0.0
Canada	36	0.5	1,551	2.1	43,249	408	2.5	436	2.6	1,078	4.3	756	3.0
Chile	18	0.2	240	0.3	13,384	63	0.4	63	0.4	87	0.3	208	0.8
Japan	127	1.7	4,123	5.6	32,477	625	3.8	648	3.9	1,227	4.9	171	0.7
Malaysia	30	0.4	296	0.4	9,766	200	1.2	176	1.1	137	0.5	118	0.5
Mexico	127	1.7	1,144	1.6	9,009	381	2.3	405	2.4	152	0.6	420	1.7
New Zealand	5	0.1	174	0.2	37,808	34	0.2	37	0.2	17	0.1	66	0.3
Peru	31	0.4	192	0.3	6,122	34	0.2	38	0.2	3	0.0	86	0.3
Singapore	6	0.1	293	0.4	52,889	351	2.1	297	1.8	625	2.5	978	3.9
United States	321	4.4	17,947	24.4	55,837	1,505	9.1	2,308	13.8	5,983	23.9	5,588	22.4
Viet Nam	92	1.2	194	0.3	2,111	162	1.0	166	1.0	9	0.0	103	0.4
TPP12	817	11.1	27,509	37.4	29,632	3,959	24.0	4,785	28.6	9,717	38.8	9,037	36.2
China	1,371	18.7	10,866	14.8	7,925	2,275	13.8	1,682	10.1	1,010	4.0	1,221	4.9
Hong Kong, China	7	0.1	310	0.4	42,423	511	3.1	559	3.3	1,486	5.9	1,573	6.3
Indonesia	258	3.5	862	1.2	3,346	150	0.9	143	0.9	30	0.1	225	0.9
Korea	51	0.7	1,378	1.9	27,222	527	3.2	436	2.6	278	1.1	175	0.7
Papua New Guinea	8	0.1	0	0.0	-	6	0.0	3	0.0	0	0.0	3	0.0
The Philippines	101	1.4	292	0.4	2,899	59	0.4	70	0.4	41	0.2	59	0.2
Russia	144	2.0	1,326	1.8	9,057	340	2.1	194	1.2	252	1.0	258	1.0
Chinese Taipei	23	0.3	523	0.7	22,294	285	1.7	238	1.4	336	1.3	72	0.3
Thailand	68	0.9	395	0.5	5,816	214	1.3	203	1.2	68	0.3	175	0.7
Non-TPP12	2,031	27.6	15,952	21.7	13,442	4,367	26.5	3,528	21.1	3,502	14.0	3,762	15.1
APEC	2,847	38.8	43,461	59.1	15,304	8,325	50.5	8,314	49.7	13,219	52.8	12,799	51.2
World	7,347	100	73,502	100	10,005	16,482	100	16,725	100	25,045	100	24,983	100

Source: StatsAPEC Online

Among the TPP economies, the US – prior to its withdrawal - was by far the largest member in terms of population, GDP, foreign trade, and FDI, and Japan was second largest in all these categories except for inward FDI. The combined shares of the US and Japan in TPP members in terms of population, GDP, merchandise exports and merchandise imports, outward FDI stock and inward FDI stock were 55%, 80%, 54%, 62%, 74% and 64%, respectively. Among non-TPP economies, China was by far the largest economy in all these aspects, except outward and inward FDI, for which Hong Kong registered larger share than China. Concerning FDI involving Hong Kong, one should note that Hong Kong is often used as an intermediary base, from which FDI is transmitted to final destinations such as China. Considering this phenomenon, FDI for Hong Kong was likely to be overestimated, while FDI for China underestimated.

These observations in this section indicate that the TPP economies have substantial impacts on the world economy, but the impacts would be much larger if non-TPP economies join the TPP and to form an FTAAP. It is also important to realize that China's participation would generate large economic impacts.

3.2 Trade Relations

Let us turn to trade relations among APEC economies as well as those economies involved in the TPP. Table 2 shows some useful information. The figures indicate the compositional shares of export destinations for the APEC economies. For example, 83.2 percent of Australian exports to the world were destined to APEC economies, and 1.9 percent went to Thailand. The economies, whose names are shown in the shade, are those involved in the TPP, while the figures in the shade with lines indicate the economies involved in the FTA. For example, Australia has FTA relationships with Brunei, Chile, Japan, Malaysia, New Zealand, Singapore, United States, Vietnam, China, Indonesia, Korea, Papua New Guinea, the Philippines, and Thailand.

Table 2: FTA Relations and Export Destinations of APEC Member Economies, 2014 (%)

Exporters/Importers	Australia	Brunei	Canada	Chile	Japan	Malaysia	Mexico	NZ	Peru	Singapore	US	Viet Nam	TPP12	China	HK	Indonesia	Korea	Papua NG	Philippines	Russia	Taipei	Thailand	Non-TPP12	APEC	World
Australia		0.0	0.5	0.1	17.9	2.3	0.2	3.0	0.0	3.2	4.1	1.1	32.4	33.9	1.1	1.9	7.4	0.8	0.6	0.2	3.0	1.9	50.8	83.2	100
Brunei Darussalam	7.6		2.3	0.0	37.2	3.5	0.0	3.5	0.0	3.3	0.2	1.0	58.5	0.9	0.1	6.1	11.0	0.0	0.7	0.0	4.4	5.2	28.3	86.9	100
Canada	0.3	0.0		0.2	2.0	0.2	1.1	0.1	0.2	0.2	76.8	0.1	81.1	3.7	0.9	0.4	0.8	0.0	0.1	0.2	0.3	0.1	6.6	87.7	100
Chile	1.2		1.6		10.0	0.2	1.7	0.1	2.4	0.1	12.2	0.5	30.0	24.6	0.3	0.3	6.2	0.0	0.2	1.0	2.2	0.4	35.1	65.2	100
Japan	2.1	0.0	1.2	0.2		2.0	1.5	0.3	0.1	3.0	18.9	1.7	31.2	18.3	5.5	2.1	7.5	0.0	1.4	1.3	6.0	4.5	46.8	78.0	100
Malaysia	4.3	0.4	0.3	0.1	10.8		0.7	0.7	0.0	14.2	8.4	1.9	41.8	12.1	4.8	4.1	3.7	0.2	1.6	0.3	3.8	5.3	35.8	77.6	100
Mexico	0.3	0.0	2.7	0.5	0.7	0.0		0.0	0.4	0.1	80.3	0.0	85.1	1.5	0.3	0.0	0.5	0.0	0.0	0.1	0.2	0.1	2.7	87.8	100
New Zealand	17.5	0.0	1.2	0.3	5.9	2.0	0.6		0.3	2.0	9.4	1.1	40.2	19.9	1.5	1.9	3.5	0.4	1.5	0.5	2.2	1.6	32.9	73.2	100
Peru	0.3	0.0	6.6	4.0	4.1	0.1	1.9	0.1		0.1	16.2	0.3	33.7	18.3	0.4	0.1	3.2	0.0	0.4	0.4	0.8	0.2	23.8	57.5	100
Singapore	3.8	0.5	0.2	0.0	4.1	12.0	0.2	0.5	0.0		5.9	3.1	30.4	12.6	11.0	9.4	4.1	0.2	1.7	0.1	2.0	3.7	44.8	75.2	100
United States	1.6	0.0	19.3	1.0	4.1	0.8	14.8	0.3	0.6	1.9		0.4	44.8	7.6	2.5	0.5	2.7	0.0	0.5	0.7	1.7	0.7	17.0	61.9	100
Viet Nam	2.7	0.0	1.4	0.3	9.8	2.6	0.7	0.2	0.1	2.0	19.1		38.9	9.9	3.5	1.9	4.8	0.1	1.5	1.1	1.7	2.3	26.9	65.8	100
TPP12	1.9	0.1	7.8	0.5	4.4	2.0	6.0	0.4	0.4	2.2	20.9	0.9	47.5	11.0	3.4	1.9	3.7	0.1	0.8	0.6	2.3	1.9	25.6	73.1	100
China	1.7	0.1	1.3	0.6	6.4	2.0	1.4	0.2	0.3	2.1	17.0	2.7	35.5		15.5	1.7	4.3	0.0	1.0	2.3	2.1	1.5	28.3	63.8	100
Hong Kong, China	0.9	0.0	0.6	0.1	3.3	0.7	0.7	0.1	0.1	1.5	8.4	1.7	18.0	57.3		0.5	1.6	0.0	0.6	0.4	0.3	1.5	62.3	80.3	100
Indonesia	2.8	0.1	0.4	0.1	13.1	5.5	0.5	0.3	0.1	9.5	9.4	1.4	43.3	10.0	1.6		6.0	0.1	2.2	0.6	4.2	3.3	28.0	71.2	100
Korea	1.8	0.1	0.9	0.4	5.6	1.3	1.9	0.3	0.2	4.2	12.3	3.9	32.9	25.4	4.8	2.0		0.0	1.8	1.8	2.6	1.3	39.6	72.4	100
Papua New Guinea																									
The Philippines	1.3	0.0	1.0	0.1	22.5	1.9	0.7	0.2	0.0	7.2	14.1	0.6	49.6	13.0	9.0	1.2	4.1	0.0		0.1	3.4	3.8	34.7	84.3	100
Russia	0.0	0.0	0.1	0.0	4.0	0.4	0.3	0.1	0.1	1.1	1.9	0.1	8.1	7.5	0.3	0.2	3.6	0.0	0.2		0.7	0.4	12.9	21.0	100
Chinese Taipei	1.2	0.0	0.8	0.1	5.9	2.8	0.7	0.1	0.1	6.6	11.3	3.2	33.0	26.1	12.7	1.3	4.1	0.1	3.0	0.4		2.0	49.8	82.7	100
Thailand	4.1	0.1	0.6	0.3	9.6	5.6	0.9	0.5	0.2	4.6	10.5	3.5	40.5	11.0	5.5	4.2	2.0	0.1	2.6	0.5	1.9		27.8	68.3	100
Non-TPP12	1.5	0.0	0.9	0.4	6.3	2.0	1.1	0.2	0.2	2.9	12.9	2.5	30.9	13.0	9.6	1.4	3.3	0.0	1.2	1.5	1.8	1.4	33.2	64.1	100
APEC	1.7	0.1	4.2	0.5	5.4	2.0	3.5	0.3	0.3	2.6	16.7	1.7	38.9	12.1	6.6	1.7	3.5	0.1	1.0	1.1	2.0	1.6	29.6	68.5	100

Notes: The figures are taken from APEC memders' exports to othe APEC members. The members' names in the shade are TPP12 negotiating members. The figures in the shade with lines indicate those of the member economies engaged in existing FTAs. Source: APEC, StatsAPEC, WTO, RTA database.

An examination of the patterns of FTAs among the APEC members shows that out of the possible 210 bilateral pairs of APEC economies connected through FTAs, 95 bilateral pairs are connected through FTAs. In other words, there are still a number of possible bilateral relations that may be connected through FTAs. Having made this observation, one realizes that there are essentially six economies, Canada, Hong Kong, Papua New Guinea, Russia, and Chinese Taipei that have established FTA relations with very few economies. Indeed, Russia has zero FTA relationship, while Papua New Guinea has one. One reason that these economies have not established FTA relationship with other APEC members is the absence of FTAs with ASEAN members. The intensity of FTA relationship is denser for the TPP members. Out of the possible 66 pairs of TPP members connected through FTAs, 40 pairs have been connected through FTAs. These observations indicate that the establishment of an FTAAP would contribute significantly to the intensification of the relationships among APEC members through FTAs.

One wonders about the importance of TPP in terms foreign trade for the TPP members. To respond to this inquiry, the compositional shares of export destinations for TPP member economies and other APEC economies are computed and shown in Table 2. The figures under the column titled "TPP" show that for all the TPP economies, TPP economies are important export destinations. The shares range between 85.1 percent for Mexico and 30.0 percent for Chile. Although a large part of many TPP members' exports are already covered under FTAs, establishment of TPP will expand the coverage of exports under FTA for several countries. Specifically, a significant part of exports by Japan, Vietnam, New Zealand, and Malaysia will be covered under FTA had the US remained in the TPP. It should be noted that for several countries including Australia, Chile, Japan, New Zealand, and Peru, China is a very important export destination. The figures under the column titled "APEC" show potentially huge benefit in terms of export expansion if an FTAAP is established, because dependence of APEC economies on other APEC economies in exports is very high for all the APEC members except for Russia. Excluding Russia, whose export dependence on APEC economies is low at 21.0 percent, the level of dependence on other APEC economies for APEC economies is very high, and it ranges between 57.5 percent for Peru and 87.8 percent for Mexico.

3.3 Tariff Profiles

The previous section examined international trade relationship among TPP and non-TPP APEC economies with a view that such an examination would give us some idea about possible impacts of the TPP and FTAAP. In order to examine this further, this section takes a look at tariff profiles of the TPP and non-TPP economies, as the TPP and an FTAAP are expected to eliminate/reduce tariffs on trade between the member economies.

Table 3 shows the tariff profiles for the TPP member and non-member economies. Several interesting observations may be made. First, according to the average applied tariff rates (simple average MFN applied rates), the level of protection is rather low for many economies, as all the economies except Korea and Thailand register 1-digit average tariff rates for overall trade. Having said this, it is important to recognize that the average tariff rates on agricultural products are significantly higher than those on non-agricultural products for many economies.

Second, final bound tariff rates are significantly higher compared to applied tariff rates. For example, the average MFN tariff rate for total products for Singapore is as low as 0.2 percent, while the final bound tariff rate is significantly higher at 9.6 percent. What this means is that Singapore can increase tariff rate up to 9.6 percent, the level of bound rate without violating the WTO rule, indicating possibility of increasing protection under certain circumstances. This observation argues for the importance of FTAs in general, and the TPP in particular, because FTAs lead to the reduction of bound tariffs on imports from the members to zero.

Third, the figures under the columns titled “Duty-free tariff lines (% of total)” show that there exist substantial room for tariff elimination although the average tariff rates are relatively low. The figures indicate the proportion of the number of tariff lines (products), which are subject to zero percent tariff rates, in total number of tariff lines. For example, in terms of final bound tariff rates, for Australia, 31.3 percent of tariff lines (products) in agricultural products are of duty-free, or zero tariff. In other words, 68.7 percent of agricultural products are subject to positive tariff rates. The figures show that the TPP and non-TPP member economies would benefit substantially from the TPP and FTAAP, as the TPP and FTAAP would eliminate tariffs on a large number of products.

Table 3: Tariff Profiles for APEC Economies, 2015

	Simple averagefinal bound			Simple average MFN applied			Duty-free tariff lines (% of total)			
							Final bound		MFN applied	
	Total	Ag	Non-Ag	Total	Ag	Non-ag	Ag	Non-ag	Ag	Non-ag
Australia	9.9	3.4	11.0	2.5	1.2	2.9	31.3	18.8	77.0	45.9
Brunei	25.4	32.1	24.4	1.2	0.1	1.3	0.0	0.0	98.5	79.6
Canada	6.8	16.6	5.3	4.2	16.7	2.2	46.0	35.8	59.6	78.5
Chile	25.1	26.1	25.0	6.0	6.0	6.0	0.0	0.0	0.0	0.3
Japan	4.4	16.6	2.5	4.6	12.9	2.5	34.1	55.9	36.5	55.7
Malaysia	22.3	62.1	14.9	6.1	9.4	5.5	12.9	5.0	75.0	64.1
Mexico	36.2	45.0	34.8	7.1	15.6	5.7	0.4	0.3	19.6	55.2
New Zealand	10.2	5.9	10.9	2.0	1.4	2.2	54.8	46.4	72.4	62.5
Peru	29.5	30.9	29.3	2.4	2.8	2.4	0.0	2.2	52.6	70.0
Singapore	9.6	23.3	6.5	0.2	1.1	0.0	4.1	17.0	99.8	100.0
United States	3.5	4.8	3.3	3.5	5.2	3.2	30.2	47.4	30.8	48.4
Viet Nam	11.5	19.1	10.4	9.5	16.3	8.4	8.7	15.0	15.5	38.8
China	10.0	15.7	9.2	9.9	15.6	9.0	6.0	6.5	7.2	6.9
Hong Kong	0.0	0.0	0.0	0.0	0.0	0.0	100.0	37.3	100.0	100.0
Indonesia	37.1	47.0	35.6	6.9	7.6	6.7	0.0	2.8	8.5	13.4
Korea	16.8	57.9	10.2	13.9	56.8	6.8	2.2	15.3	5.6	16.7
Papua New Guinea	32.1	44.0	30.3	4.7	12.3	3.4	0.0	0.0	47.4	81.0
Philippines	25.7	35.1	23.4	6.3	9.9	9.7	0.0	2.9	0.4	3.9
Russia	7.8	11.0	7.1	7.8	10.8	7.3	3.0	3.4	9.2	15.0
Chinese Taipei	6.3	16.5	4.7	6.4	15.9	4.8	24.6	30.4	25.0	31.1
Thailand	27.8	38.5	25.5	11.0	30.7	7.7	2.0	3.0	11.8	39.2

Notes: The figures for Burnei. Malaysia, Indonesia, and Papua New Guinea are for 2014.
Notes: The economies in the shade are the TPP12 negotiating members.
Source: WTO, Tariff Profiles 2016

3.4 Trade Facilitation: Logistics Performance Index

One of the special characteristics of the TPP is its emphasis on the establishment of business-friendly environment, under which global supply chains involving not only large corporation but also small and medium-sized enterprises (SMEs) can be established and function efficiently. To achieve this objective, agreements on trade facilitation, cooperation and capacity building, and horizontal issues such as regulatory coherence, transparency, business facilitation and competitiveness (supply chains), and small and medium-sized enterprises in the TPP agreement would play very important roles. With this observation in mind, it would be useful to examine the business environment of the TPP economies as well as other APEC economies with a focus on trade facilitation such as customs procedure.

For the analysis, information obtained from the international logistics performance (LPI) index constructed by the World Bank will be used[8]. The LPI index is constructed by computing the weighted average of the country scores on the following six dimensions, (1) efficiency of the customs clearance process (i.e. speed, simplicity, and predictability of formalities) by border; (2) Quality of trade and transport related infrastructure (e.g., ports, railroads, roads, information technology); (3) Ease of arranging competitive priced shipments; (4) Competence and quality of logistics services (e.g., transport operators, customs brokers); (5) Ability to track and trace consignments; (6) Timeliness of shipments in reaching destination within the scheduled or expected delivery time. The scorecards demonstrate comparative performance-the dimensions show on a scale (lowest score to highest score) from 1 to 5 relevant to the possible comparison groups-of all countries (world), region and income group.

Table 4 shows the ranking of international logistics performance index for the APEC economies. The number of sample economies is 160 for the 2016 study. Among the APEC economies, Singapore has the highest ranking, 5th in overall ranking, for overall performance[9]. Singapore is followed by Hong Kong (9th in overall ranking), the US (10th), Japan (12th), Canada (14th) and Australia (19th). The lowest among the APEC economies is Papua New Guinea at 105th. Wide diversity in ranking among the APEC economies indicates the need for many developing economies to improve logistics

[8] World Bank, Logistics Performance Index, http://lpi.worldbank.org/international
[9] The top four countries are Germany, Luxembourg, Sweden and the Netherlands.

performance. As for TPP members, Chile (46th), Mexico (54th), Vietnam (64th), Peru (69th), and Brunei (70th) are found to be at relatively low ranking, indicating that the enactment of the TPP would improve logistics performance of these countries.

Table 4 International Logistics Performance Index, 2016

	Overall			Customs		Infrastructure		International shipments		Logistics quality and competence		Tracking and tracing		Timeliness	
Country	score	rank	% of highest performer	score	rank	score	rank	score	rank	score	rank	score	rank	score	rank
Singapore	4.14	5	97.45	4.18	1	4.20	6	3.96	5	4.09	5	4.05	10	4.40	6
Hong Kong	4.07	9	95.14	3.94	7	4.10	10	4.05	2	4.00	11	4.03	14	4.29	9
United States	3.99	10	92.75	3.75	16	4.15	8	3.65	19	4.01	8	4.20	5	4.25	11
Japan	3.97	12	92.08	3.85	11	4.10	11	3.69	13	3.99	12	4.03	13	4.21	15
Canada	3.93	14	90.85	3.95	6	4.14	9	3.56	29	3.90	15	4.10	9	4.01	25
Australia	3.79	19	86.59	3.54	22	3.82	18	3.63	21	3.87	17	3.87	19	4.04	21
Korea, Rep,	3.72	24	84.23	3.45	26	3.79	20	3.58	27	3.69	25	3.78	24	4.03	23
Taiwan, China	3.70	25	83.62	3.23	34	3.57	26	3.57	28	3.95	13	3.59	31	4.25	12
China	3.66	27	82.49	3.32	31	3.75	23	3.70	12	3.62	27	3.68	28	3.90	31
Malaysia	3.43	32	75.21	3.17	40	3.45	33	3.48	32	3.34	35	3.46	36	3.65	47
N. Zealand	3.39	37	74.02	3.18	37	3.55	29	2.77	80	3.22	41	3.58	32	4.12	19
Thailand	3.26	45	69.90	3.11	46	3.12	46	3.37	38	3.14	49	3.20	50	3.56	52
Chile	3.25	46	69.70	3.19	35	2.77	63	3.30	43	2.97	56	3.50	34	3.71	44
Mexico	3.11	54	65.53	2.88	54	2.89	57	3.00	61	3.14	48	3.40	42	3.38	68
Indonesia	2.98	63	61.52	2.69	69	2.65	73	2.90	71	3.00	55	3.19	51	3.46	62
Vietnam	2.98	64	61.27	2.75	64	2.70	70	3.12	50	2.88	62	2.84	75	3.50	56
Peru	2.89	69	58.69	2.76	63	2.62	75	2.91	68	2.87	64	2.94	65	3.23	80
Brunei	2.87	70	57.98	2.78	57	2.75	66	3.00	62	2.57	93	2.91	68	3.19	84
Philippines	2.86	71	57.54	2.61	78	2.55	82	3.01	60	2.70	77	2.86	73	3.35	70
Russian	2.57	99	48.69	2.01	141	2.43	94	2.45	115	2.76	72	2.62	90	3.15	87
Papua New Guinea	2.51	105	46.83	2.55	85	2.32	106	2.46	114	2.35	121	2.58	93	2.78	120

Notes: Ranking is out of 160 economies.Brunei is not included in the sample. Those economies with shades are participants in TPP12 negotiations
Source: World Bank, International Logistics Performance Index, 2016

Similar patterns, i.e. wide diversity in ranking, may be identified for all six dimensions, including customs, infrastructure, international shipments, logistics quality and competence, tracking and tracing, and timeliness. Improving logistics performance requires a wide range of activities including changes in regulations, development of human resources and infrastructure, and others. The TPP with a comprehensive and broad coverage of the issues, as indicated in the next section, is expected to contribute to an improvement in logistics performance of the TPP members, which in turn would promote economic growth.

3.5 Investment Environment: Ease of Doing Business Indicators

Foreign direct investment (FDI) plays a very important role in promoting economic growth. FDI brings not only the fund for investment, which would generate production and employment, but also technology and management know-how, which contribute significantly to the economic growthof the recipient countries, or host countries of FDI. FDI has played a particularly important role for economic development of East Asian economies, as FDI has enabled the recipients to get involved in production networks, or global value chains (GVCs), through the establishment of foreign affiliates of multinational corporations (MNCs), main FDI suppliers. Being a part of GVSs, East Asian countries have been engaged in international trade and technology acquisition, which in turn have contributed to rapid economic growth. Realizing these beneficial impacts of receiving FDI, many governments are eager to attract FDI. Indeed, keen competition for attracting FDI has been going on throughout the world. Enacting high quality investment agreement such as the TPP is expected to improve the attractiveness of the country as a host to FDI. With these observations in mind, we evaluate FDI environment of TPP members and non-TPP members below.

Table 5 shows the ranking of the APEC economies in terms of ease of doing business index, which covers 190 countries/economies. This index is derived by evaluating the following items, which are closely related to business activities; starting business, dealing with construction permit, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency. It should be pointed out that these items are important not only for foreign investors but also for local investors. Having said this, these items are particularly important for foreign investor, who has limited information about the market compared to local investors. Furthermore, it is important to note that other items such as the law concerning foreign investment, which has a crucial importance in regulating FDI, is not explicitly taken up in constructing the index. Finally, one should recognize that only some of the items including protection of minority investors and trading across borders are covered in the TPP.

Table 5: Doing Business Ranking, 2016

	Ease of Doing Business Rank	Starting a Business	Dealing with Construction Permits	Getting Electricity	Registering Property	Getting Credit	Protecting Minority Investors	Paying Taxes	Trading across Borders	Enforcing Contracts	Resolving **Insolvency**
New Zealand	1	1	1	34	1	1	1	11	55	13	34
Singapore	2	6	10	10	19	20	1	8	41	2	29
Hong Kong	4	3	5	3	61	20	3	3	42	21	28
Korea, Rep	5	11	31	1	39	44	13	23	32	1	4
United States	8	51	39	36	36	2	41	36	35	20	5
Taiwan	11	19	3	2	17	62	22	30	68	14	22
Australia	15	7	2	41	45	5	63	25	91	3	21
Canada	22	2	57	108	43	7	7	17	46	112	15
Malaysia	23	112	13	8	40	20	3	61	60	42	46
Japan	34	89	60	15	49	82	53	70	49	48	2
Russia	40	26	115	30	9	44	53	45	140	12	51
Thailand	46	78	42	37	68	82	27	109	56	51	23
Mexico	47	93	83	98	101	5	53	114	61	40	30
Peru	54	103	51	62	37	16	53	105	86	63	79
Chile	57	59	26	64	58	82	32	120	65	56	55
Brunei	72	84	37	21	134	62	102	89	142	93	57
China	78	127	177	97	42	62	123	131	96	5	53
Vietnam	82	121	24	96	59	32	87	167	93	69	125
Indonesia	91	151	116	49	118	62	70	104	108	166	76
Philippines	99	171	85	22	112	118	137	115	95	136	56
Papua New Guinea	119	130	126	103	119	32	87	94	164	170	137

Note: The ranking is out of 190 countries/economies
Source: World Bank, Doing Business 2016

One observes big differences in the ranking of the TPP economies. New Zealand and Singapore are ranked 1st and 2nd, respectively, while Vietnam and Brunei are ranked 82nd and 72nd, respectively. One also observes wide variations in the ranking of TPP economies for different items. Using the ranking below 100 as a criterion for the problematic situation, we find the following items as the serious problems for some TPP countries; starting a business (Vietnam, Malaysia, Peru), getting electricity (Canada), registering property (Brunei, Mexico), protecting minority investors (Brunei), paying taxes (Vietnam, Chile, Mexico, Peru), trading across borders (Brunei), enforcing contracts (Canada), resolving insolvency (Vietnam). It is quite surprising to find that Canada is ranked very low for getting electricity and enforcing contracts. Before closing this section, one may note that some non-TPP APEC economies need to improve FDI environment, in order to attract FDI. Specifically, Indonesia, the Philippines, and Papua New Guinea are ranked below Vietnam, registering 91st, 99th and 119th, respectively, indicating the need to improve FDI environment, in order to successfully attract FDI.

4. TPP Agreement

The TPP is a regional agreement that liberalizes trade and investment and addresses new and traditional trade issues and 21st-century challenges[10]. It is an ambitious agreement with high-level of trade and investment liberalization and comprehensive issue coverage, setting a new standard for global trade and incorporating next-generation issues with a hope that the TPP will boost the competitiveness of TPP countries in the global economy[11].

Table 6 shows the contents of TPP agreement. It has 30 chapters and it contains a number of issues not covered by other FTAs. They include labor, environment, state-owned enterprises, regulatory coherence, transparency and anti-corruption. These issues have been recognized as barriers to free and fair business activities, but they were difficult to incorporate in FTAs because of opposition from mainly developing countries. In the following we examine some of the important achievements by TPP.

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[10] TPP Leaders' statement, November 12, 2011 http://www.ustr.gov/about-us/press-office/press-releases/2011/november/trans-pacific-partnership-leaders-statement

[11] USTR, Outline of the Trans-Pacific Partnership Agreement http://www.ustr.gov/about-us/press-office/fact-sheets/2011/november/outlines-trans-pacific-partnership-agreement

Table 6: TPP Agreement

#	Chapter Title	#	Chapter Title
1	Initial Provisions and General definitions	16	Competition
2	National Treatment and Market Access	17	State-Owned Enterprises
3	Rules of Origin and Origin Procedures	18	Intellectual Property
4	Textiles and Apparel	19	Labour
5	Customs Administration and Trade Facilitation	20	Environment
6	Trade Remedies	21	Cooperation and Capacity Building
7	Sanitary and Phytosanitary Measures	22	Competitiveness and Business Facilitation
8	Technical Barriers to Trade	23	Development
9	Investment	24	Small and Medium-Sized Enterprises
10	Cross Border Trade in Services	25	Regulatory Coherence
11	Financial Services	26	Transparency and Anti-corruption
12	Temporary Entry for Business Persons	27	Administrative and Institutional Provisions
13	Telecommunications	28	Dispute Settlement
14	Electronic Commerce	29	Exceptions
15	Government Procurement	30	Final Provisions

Source: USTR webside
https://ustr.gov/trade-agreements/free-trade-agreements/trans-pacific-partnership/tpp-full-text

4.1 Market Access

Achieving a free and open business environment is an important objective of the TPP.[12] Trade liberalization, or market access, was one of the most difficult issues in the TPP negotiations. Table 7 shows the current level of tariff protection for the TPP countries and their commitments on market access in goods, or tariff reduction/elimination (Chapter 2)[13]. The figures under the headings "Final Bound" and "MFN Applied" indicate the shares of products with zero tariff rates in total number of products (tariff lines) registered under the WTO. MFN Applied indicates the actual practice while Final Bound indicates formal pledges which cannot be increased. In other words, for Australia, concerning agricultural products, 77.0 percent of the tariff line products have zero tariff rates in

[12] Cimino-Isaacs and Schott (2016) provides a useful assessment of TPP.
[13] Actual figures in Table 7 are the same as those shown in Table 3 under the title of "Duty-free tariff lines."

practice, while this share is reduced to 31.3 percent in terms of their commitment to the WTO. In other words, Australia can impose import tariff on 45.7 percent of the agricultural products without violating their WTO commitment. All TPP members, with a notable exception of Japan, committed to eliminate tariffs on virtually all the products with or without transition period in the TPP. Considering the limited commitment on tariff elimination under the World Trade Organization, the commitment made by the TPP members to realize an open market is remarkable.

Table 7: Tariff Elimination under the TPP (%)

	Actual Figures (2015)				TPP Commitments				
	Agricultural products		Manufactured products		Total	Agricultural products		Manufactured products	
	Final bound	MFN applied	Final bound	MFN applied	Eventual elimination	Immediate elimination	Eventual elimination	Immediate elimination	Eventual elimination
Australia	31.3	77.0	18.8	45.9	100	99.5	100	91.8	99.8
Brunei	0.0	98.5	0.0	78.5	100	98.6	100	70.2	96.4
Canada	46.0	59.6	25.8	78.5	99	86.2	94.1	96.9	100
Chile	0.0	0.0	0.0	0.3	100	96.3	99.5	94.7	100
Japan	34.1	36.5	55.9	55.7	95	51.3	81	95.3	100
Malaysia	12.9	75.0	5.0	64.1	100	96.7	99.6	78.8	100
Mexico	0.4	19.6	0.3	55.2	99	74.1	96.4	77	99.6
New Zealand	54.8	72.4	46.4	62.5	100	97.7	100	93.9	100
Peru	0.0	52.6	2.2	70.0	99	82.1	96	80.2	100
Singapore	4.1	99.8	17.0	100.0	100	100	100	100	100
United States	30.2	30.8	47.4	48.4	100	55.5	98.8	90.9	100
Viet Nam	8.7	15.5	15.0	38.8	100	42.6	99.4	70.2	100

Note: The figures are shares of products whose tariffs will be eliminated in total number of products at HS-6 classification
Source: WTO Tariff Profiles and the Japanese Government

The adoption of cumulative rules of origin rule in the TPP facilitates the construction and use of production network/supply chains in the TPP member countries as intermediate goods/parts and components sourced in the TPP member countries are treated as TPP products and thus can be traded tariff-free.

The agreement on government procurement (Chapter 15) enables TPP foreign suppliers to bid for central government procurement contracts in the TPP member countries. Government procurement markets are open to the WTO members that are parties to the Government Procurement Agreement

(GPA). Among the TPP members, only Japan, New Zealand, and Singapore are GPA members. Hence, the TPP opened the government procurement market of the remaining eight countries, Australia, Brunei, Canada, Chile, Malaysia, Mexico, Peru, and Vietnam.

4.2 Services and Investment

The TPP ensures national treatment to foreign services providers and foreign investors (Chapters 9 and 10). In other words, foreign firms are not discriminated against vis-à-vis local firms in the TPP member countries. However, sensitive areas such as the defense sector are excluded from this treatment based on the negative list approach which allows for a more liberalizing outcome (by explicitly designating excluded sectors) than a positive list approach (where only opens sectors explicitly listed). It is noteworthy that the TPP prohibits the application of a number of restrictions by the government on the behavior of foreign firms. They include the prohibition of performance requirement such as technology transfer requirement and restriction on transfer of funds.

Special treatment of state-owned enterprises (SOEs) that creates unfair competitive advantage is not permitted in the TPP (Chapter 17). This treatment of SOEs enables foreign firms to expand their business in Malaysia and Vietnam, where SOEs dominate in their respective markets. The agreement on intellectual property rights (IPRs) (Chapter 18) and the adoption of the investor-state dispute settlement (ISDS) (the Chapter aims to encourage FDI flows with protection of intellectual assets and enforcement of obligations on the part of host country governments).

A brief examination of TPP's features in this section indicates that the agreement, if enacted, is likely to result in an expansion of trade in goods and services and investment, contributing to economic growth of the TPP member countries.

5. Economic Impacts of the TPP

Possible economic impacts of the TPP have been analyzed by various researchers. Among them, Petri and Plummer (2016) is one of the most cited studies[14]. Petri and Plummer use a global computable

[14] Petri and Plummer (2016) provides a brief survey of the results from other studies and find that their estimates are more or less similar to those obtained in other studies.

general equilibrium (CGE) model to examine the issue. A CGE model mimics the real economy by explicitly considering economic activities of firms, consumers, and the governments, which are interacted each other in the markets. They conduct a simulation exercise in two steps. The first step is the construction of a baseline case for the 2015-30 period with a number of assumptions on population growth, production technology, consumer preferences, and others. The second step is to obtain an economic situation resulting from the implementation of the TPP by running a CGE model with a new set of assumptions, which are consistent with the TPP. Then the impacts of the TPP are obtained by comparing the results from these two steps of the analysis.

Table 8 shows the results of the analysis by Petri and Plummer. The expected impacts of the TPP on economic growth (real income effect) are shown for three different cases; low, central, and high cases (scenarios). They differ in the assumptions about economic growth, the size of reductions in non-tariff barriers and the percentage of tariff cuts that are used by firms. Our discussions focus on the results for the central case.

The TPP is expected to raise real income of the TPP members by 1.1 percent from the baseline case in 2030, while its impacts on non-TPP members is zero. All TPP members are expected to increase their real income, while some non-TPP members are expected to suffer a decline in their real income. These results are consistent with an expectation that FTA members are likely to gain from the trade creation effect, while non-FTA members are likely to suffer from the trade diversion effect. Among the TPP members, Vietnam is expected to gain the most in terms of the rate of increase in real income with an increase of 8.1 percent. Vietnam is followed by Malaysia (7.6%) and Brunei (5.9%). The countries with smaller gains include the US (0.5%), Australia (0.6%), and Chile (0.9%). It should be noted that the cross-country pattern of the gain in terms of absolute value in real income is quite different from the pattern observed in terms of the rate of change in real income. In terms of absolute value in real income, the US is expected to gain the most ($131 billion) and Japan the second ($125 billion), while the gains for Vietnam and Malaysia are much smaller at $41 billion and $52 billion, respectively. These observations indicate that the gains for large countries in terms economic size such as the US and Japan may appear small in terms of the rate of growth, but their gains are quite substantial in terms of absolute magnitude.

Table 8: Economic Impacts of the TPP (%)

	Real Income Effect			Exports	Inward FDI Stock	Outward FDI Stock
	Low	Central	High			
Americas	**0.5**	**0.7**	**0.7**	**8.2**	**2.7**	**1.4**
Canada	1.0	1.3	1.3	7.0	7.2	1.2
Chile	0.5	0.9	0.9	5.3	0.0	1.7
Mexico	0.7	1.0	0.9	4.7	1.1	0.6
Peru	1.6	2.6	2.7	10.3	5.8	3.9
United States	0.4	0.5	0.5	9.1	1.9	1.5
Asia	**0.4**	**0.4**	**0.5**	**4.2**	**1.4**	**1.2**
Brunei	4.4	5.9	6.2	9.0	11.3	3.3
China	0.0	-0.1	-0.1	0.2	0.2	0.4
Hong Kong	1.1	1.2	1.2	1.0	0.3	0.3
India	-0.1	-0.1	-0.1	0.1	0.1	0.6
Indonesia	-0.1	-0.1	-0.1	-1.0	0.8	1.1
Japan	1.9	2.5	3.1	23.2	29.8	4.0
Korea	-0.2	-0.3	-0.4	-1.0	0.2	0.3
Malaysia	5.2	7.6	7.9	20.1	17.2	7.0
Philippines	-0.1	-0.1	-0.1	-0.4	0.5	0.3
Singapore	2.0	3.9	4.0	7.5	1.8	2.2
Taiwan	0.2	0.2	0.2	0.8	0.7	0.7
Thailand	-0.6	-0.8	-0.8	-1.6	0.2	0.4
Vietnam	6.4	8.1	8.7	30.1	14.4	7.2
ASEAN nie	-0.3	-0.4	-0.4	-2.8	0.1	0.7
Oceania	**0.5**	**0.7**	**0.8**	**5.6**	**1.0**	**3.0**
Australia	0.4	0.6	0.6	4.9	0.9	3.0
New Zealand	1.5	2.2	2.8	10.2	1.4	3.2
Rest of World	**0.1**	**0.1**	**0.1**	**0.5**	**0.2**	**0.5**
European Union	0.2	0.2	0.2	0.5	0.2	0.6
Russia	0.1	0.1	0.1	0.5	0.1	0.2
ROW	0.0	0.0	0.0	0.5	0.2	0.5
WORLD	**0.3**	**0.4**	**0.4**	**3.1**	**0.8**	**0.8**
Memorandum						
TPP members	0.8	1.1	1.2	11.5	3.5	2.0
Non-members	0.0	0.0	0.0	0.3	0.2	0.5

Notes: The values indicate percentage change from the baseline case in 2030.

Source: Petri and Plummer (2016)

The differences in the impact of the TPP on real income growth among the TPP members are attributable mainly to the impacts of the TPP on their trade, particularly exports, and inward foreign direct investment, which play important roles in promoting economic growth. For example, Vietnam and Malaysia, the countries with the largest gain in terms of economic growth, are expected to increase their exports by 30.1 and 20.1 percent, respectively, and inward FDI stock by 14.4 and 17.2 percent, respectively. These figures are significantly greater compared to those for other members. The opposite pattern can be found for the US, Australia, and Chile, whose expected increase in real income is quite limited. The differences in the growth patterns of exports cam be explained by the changes in tariff rates of the trading partners, while those in the growth patterns of inward FDI stock by the changes in non-tariff barriers of the country in question. It should also be emphasized that tariff elimination of the country in question would contribute significantly to economic growth of the country, as tariff elimination, or trade liberalization, would improve resource allocation of the country[15]. Indeed, applied tariff rates imposed in Vietnam and Malaysia shown in Table 3 are quite high for these two countries. Furthermore, it should be pointed out that the large gain obtained by Vietnam may be partly attributable to the improvement of trading and FDI environment realized by the TPP, as trading and FDI environment of Vietnam evaluated in the World Bank surveys was quite unfavorable.

6. Concluding Comments

This paper examined the TPP from various aspects, which include its origin, evolution, special features and potential economic impacts. The analysis revealed that the TPP, which contains high level of trade and investment liberalization and a comprehensive set of high quality economic rules such as those on e-commerce, intellectual property rights, and government procurement, may be considered as the culmination of enormous efforts spent toward the establishment of a free and open business environment that would contribute to the promotion of dynamic economic growth.

Despite substantial benefits that may be obtained from the enactment of the TPP, the TPP in its form with 12 members is not going to be enacted because of the decision made by US President Donald

[15] Kawasaki (2014) shows that the largest gain from an FTA in terms of economic growth comes from opening up of the market of the country in question.

Trump to withdraw the US from the agreement. According to the agreement, the TPP will enter into force if at least six TPP governments, accounting for 85% of the combined GDP of the 12 countries, have ratified. The US ratification is necessary because the share of the US in the combined GDP is 60.3 percent.

Now that the US is out, what would be the alternatives? One most promising alternative would bet to form an FTA with 11 countries without the US, or the TPP11. The TPP11 members began discussing the formation of the TPP11 in May 2017. The group led by Japan and Australia has set the target of reaching an agreement by APEC Leaders Meeting in November 2017.

At least four reasons may be presented for the merits of this option. First, as discussed in the paper, the TPP is considered to be the best FTA at present, although it still has substantial room for improvement such as complete elimination of all the tariffs including those on agriculture. The TPP can be considered as a model FTA for the future FTAs. It would be a huge loss for the TPP members and non-members if the TPP is not realized even in the form of TPP11. Second, closely related to the first point, because of high quality and comprehensive coverage of rules, the TPP11 brings about sizeable benefits to the TPP11 members. According to a simulation conducted by Petri et al. (2017), real income of the TPP11 members would be higher by 1.1 percent compared to the baseline case if the TPP11 is enacted. It should be noted that the gains are significantly smaller than those obtained from the TPP12, as the corresponding value is 2.2 percent. These results are consistent with the expectation because the US market is very large. Third, it is important to keep the momentum of mega-FTAs, or mega-regionals, which include the RCEP and TTIP, in order to fight against emerging protectionism. Conclusion and enactment of TTP11 would put the competitive pressure on the RCEP and TTIP negotiations. Indeed, there were times in the past when TPP negotiations slowed down, RCEP and TTIP also slowed down. Fourth, it is important to have TPP11 enacted, so that the US may come back to join the TPP when it changes its mind.

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